computing a result of said at least one computation for the [attribute-value list] attribute-valued string associated with each query in said set of related queries; and

comparing the results associated with said set of related queries to determine one or more queries having the greatest-valued result, or one or more queries having the least-valued result.

Claim 30. (Original) The method of claim 29, wherein the step of receiving comprises the steps of:

selecting said at least one computation from a plurality of computations in response to a user or user process input;

selecting one or more attributes from a plurality of attributes in response to the user input; and

selecting a value for each attribute selected in response to the user input to form an element.

Claim 31. (Original) The method of claim 30, wherein said at least one computation defines relationship between said plurality of queries and a plurality of results.

Claim 32. (Original) The method of claim 31, wherein the results associated with said of related queries are numeric results.

Claim 33. (Original) The method of claim 32, further comprising the step of selecting one query as the query having the greatest-valued result if it is determined that more than one query in said set of related queries has the greatest-valued result.

Claim 34. (Currently Amended) The method of claim 33, further comprising the step of generating a list of queries having said at least one computation, each query being associated with an [attribute-value list] attribute-valued string having the greatest-valued result of all queries in said plurality of queries sharing one or more elements in common with a preceding query or a succeeding query in said list of queries.

Claim 35. (Currently Amended) The method of claim 34, wherein said list of queries yields a non-decreasing succession of numeric results and wherein the step of generating a list of queries comprises the steps of:

(a) adding the query in said set of related queries having the greatest-valued result as a last query in said list of queries;

(b) determining queries in said plurality of queries having said at least one computation and sharing one or more elements in common with said last query to provide a set of queries related to said last query;

(c) computing a result of said at least one computation for the [attribute-value list] attribute-valued string associated with each query in said set of queries related to said last query;

(d) comparing the results associated with said set of queries related to said last query to determine one or more queries having the greatest-valued result;

(e) selecting one query as the query having the greatest-valued result if it is determined that more than one query in said set of queries related to said last query has the greatest-valued result;

(f) adding the query having the greatest-valued result to end of said list of queries as a new last query if it is determined that said new last query is not equivalent to said last query; and

(g) repeating steps (b) through (f) until there is no query in said plurality of queries having a result greater than the last query and sharing one or more elements in common with the last query.

Claim 36. (Original) The method of claim 32, further comprising the step of selecting one query as the query having the least-valued result if it is determined that more than one query in said set of related queries has the least-valued result.

Claim 37. (Currently Amended) The method of claim 36, further comprising the step of generating a list of queries having said at least one computation, each query being associated with an [attribute-value list] attribute-valued string having the least-valued result of all queries in said plurality of queries sharing one or more elements in common with a preceding query or a succeeding query in said list of queries.

Claim 38. (Original) The method of claim 37, wherein said list of queries yields a non-increasing succession of numeric results and wherein the step of generating a list comprises the steps of:

(a) adding the query in said set of related queries having the least-valued result as a last query in said list;

(b) determining queries in said plurality of queries having said at least one computation and sharing one or more elements in common with said last query to provide a set of queries related to said last query;

(c) computing a result of said at least one computation for the attribute-valued string associated with each query in said set of queries related to said last query;

(d) comparing the results associated with said set of queries related to said last query to determine one or more queries having the least-valued result;

(e) selecting one query as the query having the least-valued result if it is determined that more than one query in said set of queries related to said last query has the least-valued result;

(f) adding the query having the least-valued result to end of said list as a new last query if it is determined that said new last query is not equivalent to the last query; and

(g) repeating steps (b) through (f) until there is no query in said plurality of queries having a result less than the last query and sharing one or more elements in common with the last query.

Claim 39. (Currently Amended) The method of claim 29, further comprising the step of:

(a) assigning one query from said set of related queries as a first query;

(b) determining queries in said plurality of queries having said at least one computation and sharing one or more elements in common with said first query to provide a set of queries related to said first query;

(c) computing a result of said at least one computation for the [attribute-value list] attribute-valued string associated with each query in said set of queries related to said first query;

(d) comparing the results associated with said set of queries related to said first query to determine one or more queries having the greatest-valued result, or one or more queries having the least-valued result;

(e) assigning another query in said set of related queries as said first query; and

(f) repeating steps (b) through (e) for every query in said set of related queries.

Claim 40. (Original) The method of claim 39, wherein the step (d) further comprises the steps of determining whether said first query has the greatest-valued result or the least-valued result.

Claim 41. (Original) The method of claim 29, further comprising the step of generating pre-computed greatest-valued and pre-computed least-valued lists by pre-determining for each query in said plurality of queries whether said each query has a greatest-valued result or a least-valued result for all queries in said plurality of queries having said at least one computation and sharing one or more elements in common with said each query.

Claim 42. (Original) The method of claim 41, further comprising the steps of:

determining whether any query in said set of related queries is in said pre-computed greatest-valued list to provide a set of max queries; and

determining whether any query in said set of related queries is in said pre-computed least-valued list to provide a set of min queries.

Claim 43. (Original) The method of claim 29, further comprising the step of displaying the user query and the result of the user query along with the greatest-valued result and one or more queries having the greatest-valued result.

Claim 44. (Original) The method of claim 43, wherein the step of displaying further displays the least-valued result and one or more queries having the least-valued result.

Claim 45. (Original) The method of claim 35, further comprising the step of displaying the user query and the result of the user query along with each query and the corresponding greatest-valued result in said list.

Claim 46. (Original) The method of claim 38, further comprising the step of displaying the user query and the result of the user query along with each query and the corresponding least-valued result in said list.

Claim 47. (Original) The method of claim 40, wherein the step (d) further comprises the step of displaying the user query and the result of the user query along with said first query and the corresponding greatest-valued result if it is determined that said first query has the greatest-valued result.

Claim 48. (Original) The method of claim 47, wherein the step displaying further displays said first query and the corresponding least-valued result if it determined that said first query has the least-valued result.

Claim 49. (Original) The method of claim 42, further comprising the steps of:

determining whether any query in said pre-computed greatest-valued list is not in said set of max queries; and

determining whether any query in said pre-computed least-valued list is not in said set of min queries.

Claim 50. (Currently Amended) A method of finding queries having greatest-valued or least-valued results from a plurality of queries, each query having at least one computation and consisting of [an attribute-value list] attribute-valued string having one or more elements, each element being associated with an attribute having a value, comprising the steps of:

generating pre-computed greatest-valued and pre-computed least-valued lists for each computation in a plurality of computations by:

pre-determining queries in said plurality of queries having said each computation to provide a set of computationally related queries; and

pre-determining for each query in said set of computationally related queries whether said each query has the greatest-valued result or the least-valued result for all queries in said set of computationally related queries sharing one or more elements in common with said each query;

receiving a user query consisting of at least one computation and one or more elements assigned by a user or user process;

selecting said pre-computed greatest-valued list and said pre-computed least-valued list associated with said at least one computation of the user query;

determining queries in said selected pre-computed greatest-valued list sharing one or more elements in common with the user query to provide one or more queries having corresponding greatest-valued results to provide a set of max queries; and

determining queries in said selected pre-computed least-valued list sharing one or more elements in common with the user query to provide one or more queries having corresponding least-valued results to provide a set of min queries.

Claim 51. (Original) The method of claim 50, wherein each computation in said plurality of computation defines a relationship between said plurality of queries and a plurality of results.

Claim 52. (Original) The method of claim 50, further comprising the step of displaying the user query and the result of the user query along with each query and the corresponding greatest-valued result in said set of max queries.

Claim 53. (Original) The method of claim 52, wherein the step of displaying displays each query and the corresponding least-valued result in said set of min queries.

Claim 54. (Currently Amended) A method of finding queries having greatest-valued or least-valued results from a plurality of queries, comprising the steps of:

(a) receiving a user query consisting of a plurality of computations and an [attribute-value list] attribute-valued string having one or more elements, each element being associated with an attribute having a value assigned by a user;

(b) assigning one computation from said plurality of computations as a first computation;

(c) determining queries in said plurality of queries having said first computation to provide a set of computationally related queries;

(d) determining queries in said set of computationally related queries sharing one or more elements in common with the user query to provide a set of related queries;

(e) computing a result of said first computation for the [attribute-value list] attribute-valued string associated with each query in said set of related queries;

(f) comparing the results associated with said set of related queries to determine one or more queries having the greatest-valued result or one or more queries having the least-valued result;

(g) assigning another computation from said plurality of computations as said first computation; and

(h) repeating steps (f) through (g) for every computation in said plurality of computations.

Claim 55. (Currently Amended) The method of claim 54, wherein the step (d) further comprises the steps of:

(i) assigning one query from said set of related queries as a first query;

(j) determining queries in said set of computationally related queries sharing one or more elements in common with said first query to provide a set of queries related to said first query;

(k) computing a result of said first computation for the [attribute-value list] attribute-valued string associated with each query in said set of queries related to said first query;

(l) comparing the results associated with said set of queries related to said first query to determine one or more queries having the greatest-valued result, or one or more queries having the least-valued result;

(m) assigning another query in said set of related queries as said first query; and

(n) repeating steps (j) through (m) for every query in said set of related queries.

Claim 56. (Original) The method of claim 55, wherein the step (l) further comprises the step of determining whether said first query has the greatest valued-result or the least-valued result.

Claim 57. (Currently Amended) Apparatus for finding queries having greatest-valued or least-valued results, comprising:

a device for receiving a user query consisting of at least one computation and an attribute-value having one or more elements, each element being associated with an attribute having a value assigned by a user;

a device for determining queries in said plurality of queries having said at least one computation and one or more elements in common with the user query to provide a set of related queries;

a computing device for computing a result of said at least one computation for the [attribute-value list] attribute-valued string associated with each query in said set of related queries; and

a comparator for comparing the results associated with said set of related queries to determine one or more queries having the greatest-valued result or one or more queries having the least-valued result.

Claim 58. (Original) The apparatus of claim 57, wherein said device for receiving is operable to select said at least one computation from a plurality of computations in response to a user or user process input, to select one or more attributes from a plurality of attributes in response to the user input, and to select a value for each attribute selected in response to the user input to form an element.

Claim 59. (Original) The apparatus of claim 58, wherein said at least one computation defines relationship between said plurality of queries and a plurality of results.

Claim 60. (Original) The apparatus of claim 59, wherein the results associated with said of related queries are numeric results.

Claim 61. (Original) The apparatus of claim 60, further comprising a selecting device for selecting one query as the query having the greatest-valued result if it is determined that more than one query in said set of related queries has the greatest-valued result.

Claim 62. (Currently Amended) The apparatus of claim 61, further comprising a generating device for generating a list of queries having said at least one computation, each query being associated with an [attribute-value list] attribute-valued string having the greatest-valued result of all queries in said plurality of queries sharing one or more elements for common with a preceding query or a succeeding query in said list of queries.

Claim 63. (Currently Amended) The apparatus of claim 62, wherein said list of queries yields a non-decreasing succession of numeric results and wherein said generating

device comprises a control device for adding the query having the greatest-valued result as a last query in said list of queries, for operating said device for determining to determine queries in said plurality of queries having said at least one computation and sharing one or more elements in common with said last query to provide a set of queries related to said last query, for operating said computing device to compute a result of said at least one computation for the [attribute-value list] attribute-valued string associated with each query in said set of queries related to said last query, for operating said comparator to compare the results associated with said set of queries related to said last query to determine one or more queries having the greatest-valued result, for selecting one query as the query having the greatest-valued result if it is determined that more than one-query in said set of queries related to said last query has the greatest-valued result, and for adding the query having the greatest-valued result to end of said list of queries as a new last query if it is determined that said new last query is not equivalent to said last query.

Claim 64. (Original) The apparatus of claim 60, further comprising a selecting device for selecting one query as the query having the least-valued result if it is determined that more than one query in said set of related queries has the least-valued result.

Claim 65. (Currently Amended) The apparatus of claim 64, further comprising a generating device for generating a list of queries having said at least one computation, each query being associated with an [attribute-value list] attribute-valued string having the least-valued result of all queries in said plurality of queries sharing one or more elements in common with a preceding query or a succeeding query in said list of queries.

Claim 66. (Currently Amended) The apparatus of claim 65, wherein said list of queries yields a non-decreasing succession of numeric results and wherein said generating device comprises a control device for adding the query in said of related queries having the least-valued result as a last query in said list of queries for operating said device for determining to determine queries in said plurality of queries having said at least one computation and share one or more elements in common with said last query to provide a set of queries related to said last query, for operating said computing device to compute a result of said at least one computation for the [attribute-value list] attribute-valued string associated with each query in said set of queries related to said

last query, for operating said comparator to compare the results associated with said set of queries related to said last query to determine one or more queries having the least-valued result, for selecting one query as the query having the least-valued result if it is determined that more than one query in said set of queries related to said last query has the least-valued result, and for adding the query having the least-valued result to end of said list of queries as a new last query if it is determined that said new last query is not equivalent to said last query.

Claim 67. (Currently Amended) The apparatus of claim 57, further comprising a control device for assigning one query from said set of related queries as a first query, for operating said device for determining to determine queries in said plurality of queries having said at least one computation and sharing one or more elements in common with said first query to provide a set of queries related to said first query, for operating said computing device to compute a result of said at least one computation for the [attribute-value list] attribute-valued string associated with each query in said set of queries related to said first query, for operating said comparator to compare the results associated with said set of queries related to said first query to determine one or more queries having the greatest-valued result, or one or more queries having the least-valued result, and for assigning another query in said set of related queries as said first query.

Claim 68. (Original) The apparatus of claim 67, wherein said control device is operable to control said device for determining to determine whether said first query has the greatest-valued result or the least-valued result.

Claim 69. (Original) The apparatus of claim 57, further comprising :

a device for generating pre-computed greatest-valued and pre-computed least-valued lists by pre-determining for each query in said plurality of queries whether said each query has the greatest-valued result or the least-valued result for all queries in said plurality of queries having said at least one computation and sharing one or more elements in common with said each query; and

a storing device for storing said pre-computed greatest-valued and pre-computed least-valued results.

Claim 70. (Original) The apparatus of claim 69, wherein said control device is operable to operate said device for determining to determine whether any query in said set of related queries is in said pre-computed greatest-valued list to provide a set of max queries and to determine whether any query in said set of related queries is in said pre-computed least-valued list to provide a set of min queries.

Claim 71. (Original) The apparatus of claim 57, further comprising a display device for displaying the user query and the result of the user query along with the greatest-valued result and one or more queries having the greatest-valued result.

Claim 72. (Original) The apparatus of claim 71, wherein said display device is operable to display the least-valued result and one or more queries having the least-valued result.

Claim 73. (Original) The apparatus of claim 63, further comprising a display device for displaying the user query and the result of the user query along with each query and the corresponding greatest-valued result in said list.

Claim 74. (Original) The apparatus of claim 66, further comprising a display device for displaying the user query and the result of the user query along with each query and the corresponding least-valued result in said list.

Claim 75. (Original) The apparatus of claim 70, wherein said control device is operable to operate said device for determining to determine whether any query in said pre-computed greatest-valued list is not in said set of max queries and to determine whether any query in said pre-computed least-valued list is not in said set of min queries.

Claim 76. (Currently Amended) Apparatus for finding queries having greatest-valued or least-valued results from a plurality of queries, each query having at least one computation and consisting of an [attribute-value list] attribute-valued string having one or more elements, each element being associated with an attribute having a value comprising:

a device for generating pre-computed greatest-valued and pre-computed least-valued lists for each computation in a plurality of computations by pre-determining queries in said plurality of queries having said each computation to provide a set of

computationally related queries and pre-determining for each query in said set of computationally related queries whether said each query has the greatest-valued result or the least-valued result for all queries in said set of computationally related queries sharing one or more elements in common with said each query;

a receiver for receiving a user query consisting of at least one computation and one or more elements assigned by a user or user process;

a selector for selecting said pre-computed greatest-valued list and said pre-computed least-valued list associated with said at least one computation of the user query; and

a device for determining queries in said selected pre-computed greatest-valued list sharing one or more elements in common with the user query to provide one or more queries having corresponding greatest-valued results to provide a set of max queries and determining queries in said selected pre-computed least-valued list sharing one or more elements in common with the user query to provide one or more queries having corresponding least-valued results to provide a set of min queries.

Claim 77. (Original) The apparatus of claim 76, wherein each computation in said plurality of computation defines a relationship between said plurality of queries and a plurality of results.

Claim 78. (Original) The apparatus of claim 76, further comprising a display device for displaying the user query and the result of the user query along with each query and the corresponding greatest-valued result in said set of max queries.

Claim 79. (Original) The apparatus of claim 76, wherein the step of displaying displays each query and the corresponding least-valued result in said set of min queries.

Claim 80. (Original) The apparatus of claim 79, wherein said computing device is operable to compute results for sports data

Claim 81. (Original) The apparatus of claim 79, wherein said computing device is operable to compute results for call center data.

Claim 82. (Original) The apparatus of claim 79, wherein said computing device is operable to compute results for customer relationship management data.

Claim 83. (Original) The apparatus of claim 79, wherein said computing device is operable to compute results for banking data.

Claim 84. (Original) The apparatus of claim 79, wherein said computing device is operable to compute results for multimedia data.

Claim 85. (Original) The apparatus of claim 79, wherein said computing device is operable to compute results for textual data.

Claim 86. (Original) The apparatus of claim 80, wherein said sports data includes tennis data.

Claim 87. (Original) The apparatus of claim 80, wherein said sports data includes soccer data.

Claim 88. (Original) The apparatus of claim 80, wherein said sports data includes golf data.

Claim 89. (Original) The apparatus of claim 80, wherein said sports data includes football data.

Claim 90. (Original) The apparatus of claim 80, wherein said sports data includes basketball data.

Claim 91. (Original) The apparatus of claim 80, wherein said sports data includes baseball data.

Claim 92. (Original) The apparatus of claim 80, wherein said sports data includes cricket data.

Claim 93. (Currently Amended) Apparatus of finding queries having greatest-valued or least-valued result from a plurality of queries, comprising:

a receiver for receiving a user query consisting of a plurality of computations and an [attribute-value list] attribute-valued string having one or more elements, each element being associated with an attribute having a value assigned by a user;

a device for assigning one computation from said plurality of computation as a first computation;

a device for determining queries in said plurality of queries having said first computation to provide a set of computationally related queries and determining queries in said set of computationally related queries sharing one or more elements in common with the user query to provide a set of related queries;

a company device for computing a result of said first computation for the [attribute-value list] attribute-valued string associated with each query in said set of related queries;

a comparator for comparing the results associated with said set of related queries to determine one or more queries having the greatest-valued result or one or more queries having the least-valued result; and

a control device for controlling said device for assigning to assign another computation from said plurality of computations as said first computation.

Claim 94. (Currently Amended) The apparatus of claim 93, wherein said control device is operable to operate said device for assigning to assign one query from said set of related queries as a first query, for operating said device for determining to determine queries in said set of computationally related queries sharing one or more elements in common with said first query to provide a set of queries related to said first query, for operating said computing device to compute a result of said first computation for the [attribute-value list] attribute-valued string associated with each query in said set of queries related to said first query, for operating said comparator to compare the results associated with said set of queries related to said first query to determine one or more queries having the greatest-valued result, or one or more queries having the least-valued result, and for operating said device for assigning to assign another query in said set of related queries as said first query.

Claim 95. (Original) The apparatus of claim 94, wherein said comparator is operable to determining whether said first query has the greatest valued-result or the least-valued result.

Claim 96. (Currently Amended) Apparatus of finding queries having greatest-valued or least-valued results from a plurality of queries, comprising:

a receiver for receiving a plurality user queries, each user query being associated with a different user or user process and consisting of at least one computation and an [attribute-value list] attribute-valued string having one or more elements, each element being associated with an attribute having a value assigned by the associated user;